

## ABSTRACT OF THE DISCLOSURE

Homogeneous compressed gas mixtures of perfluorinated and/or partially fluorinated hydrocarbons and a gas of lesser density are produced using an optionally mobile mixing station including at least the following components: a gas pre-mixing stage in which separately provided gases are brought together; a static mixer and/or buffer tank connected to the pre-mixing stage; and a compressor connected to the static mixer or buffer tank. If a buffer tank is used, a return line may be provided from the compressor outlet to the buffer tank. Mixtures of perfluorinated and/or partially fluorinated hydrocarbons and/or ethers and inert gases such as noble gases, CO<sub>2</sub> or N<sub>2</sub> and/or SF<sub>6</sub>, are obtained which are suitable as insulating gases for current-carrying underground cables or gas-insulated switches. High flow rates can be processed using the method, and mass flow meters ensure accuracy and reliability.